

INTEGRATED SPATIAL DATABASES: DIGITAL IMAGES AND GIS¹

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Organizer:

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The international workshop on “Integrated Spatial Databases: Digital Images and GIS” (ISD’99) was held in Portland, Maine, on June 14-16, 1999. The workshop included 24 presentations and a concluding group discussion. Its scope was to address the integration of digital images and GIS, and the many research issues related to this challenge.

The *need* for this integration is dictated by modern decision-making processes, which are becoming increasingly aware of the spatial nature of data, and by the expanding demand for up-to-date, easily accessible spatial information for everyone. As a result, this need brings forward several issues that have to be addressed by the relevant scientific communities. The necessity of ensuring the spatial and temporal validity of spatial databases, of improving and expanding geospatial analysis capabilities, and of addressing the integration of huge volumes of multiple versions and types of spatial information are but few of these issues.

The *potential* for integration on the other hand is becoming recently much more apparent and feasible. In addition to the obvious compatibility of digital imagery and GIS, this potential is supported by concurrent rapid advancements in a variety of fields, especially digital image analysis, geographic information science, and database research. Accordingly, this workshop intended to provide a needed forum for bringing together experts from these overlapping but not always interacting scientific communities.

Workshop presentations reflected the cyclical nature of the integration process itself: applications bring forward needs for theoretical developments, which in turn enable novel applications, which subsequently impose new needs and demand further extensions in the supporting theoretical concepts and foundations. Papers and discussions indicated that there is a variety of new issues that need to be addressed by the relevant research communities. These issues are brought forward by the increasingly spatiotemporal nature of geospatial information including the availability of video and video-rate data, by multimedia environments, and by the expanding metadata needs and forms.

Further information:

A workshop web page can be found at <http://www.spatial.maine.edu/~peggy/nsfWS.html>. The proceedings, titled “Integrated Spatial Databases: Digital Images and GIS”, were published as Vol. 1737 of the series Lecture Notes in Computer Science of Springer Verlag (P. Agouris & A. Stefanidis, eds). Information on how to obtain this volume can be found at Springer’s web search site (<http://www.springer.de/search.html>) or the workshop web page (see above).

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